

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PCT03-090	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/KR2004/000119	International filing date (<i>day/month/year</i>) 20 JANUARY 2004 (20.01.2004)	(Earliest) Priority Date (<i>day/month/year</i>) 20 JANUARY 2003 (20.01.2003)
Applicant NEUROTECH CO., LTD. et al		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☒ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (See Box No. III)

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 17

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

b. ☐ none of the figure is to be published with the abstract.

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Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:

a. type of material

- ☒ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ in written format
☒ in computer readable form

c. time of filing/furnishing

- ☐ contained in the international application as filed
☒ filed together with the international application in computer readable form
☐ furnished subsequently to this Authority for the purposes of search

2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

3. Additional comments:

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A. CLASSIFICATION OF SUBJECT MATTER**IPC7 A61K 31/60**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 A61K 31/60

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean patents and applications for inventions since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Pubmed [(NADPH oxidase inhibitor OR trolox OR BAS) AND (neurotrophin OR BDNF)]

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	LOBNER et al., 'Neurotrophin factor effects in oxidative stress-induced neuronal death', Neurochemical Research, May 2003, Vol.28(5), pp.749-756 See abstract	1 - 10
X <i>p1</i>	KIM et al., 'Brain-derived neurotrophic factor can act as a pronecrotic factor through transcriptional and translational activation of NADPH oxidase', The Journal of Cell Biology, 2002, Vol.159(5), pp.821-831 See abstract.	1 - 10
X <i>p2</i> Y <i>p2</i>	<i>See abstract</i> BATES et al., 'Neurotrophin-3 promotes cell death induced in cerebral ischemia, oxygen-glicose deprivation, and oxidative stress: Possible involvement of oxygen free radicals', Neurobiology of Disease, 2002, Vol.9, pp.24-37 See abstract.	1 - 10 11 - 13
X <i>p3</i>	HWANG et al., 'The role of NADPH oxidase, neuronal nitric oxide synthase and poly(ADP ribose)polymerase in oxidative neuronal death induced in cortical cultures by brain-derived neurotrophic factor and neurotrophin-4/5', Journal of Neurochemistry, 2002, Vo.82(4), pp.894-902 See abstract.	1 - 10
Y <i>p4</i>	WO 01/79153 A1 (NEUROTECH CO., LTD) 25 October 2001 See the whole document.	11 - 13

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
 "E" earlier application or patent but published on or after the international filing date
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
 "O" document referring to an oral disclosure, use, exhibition or other means
 "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
 "&" document member of the same patent family

Date of the actual completion of the international search

19 APRIL 2004 (19.04.2004)

Date of mailing of the international search report

20 APRIL 2004 (20.04.2004)

Name and mailing address of the ISA/KR



Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

LEE, Mi Jeong

Telephone No. 82-42-481-5601



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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ms	WON et al., 'NY-4/5 exacerbates free radical-induced neuronal necrosis in vitro and in vivo', 2000, Vol.7, pp.251-259 See abstract.	1 - 10

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2004/000119

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
W001/79153A1	25. 10. 2001	JP2003535051T2	25. 11. 2003
		EP1274675A1	15. 01. 2003
		CA2405518AA	25. 10. 2001
		AU0041494A5	30. 10. 2001